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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,708	12/13/2001	Satoshi Yoshihara	09792909-5277	2210

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EXAMINER	
WORKU, NEGUSSIE	
ART UNIT	**PAPER NUMBER**
2625	

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/022,708	YOSHIHARA ET AL.	
	Examiner	Art Unit	
	Negussie Worku	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Negussie Worku 6/24/06

DOUGLAS Q. TRAN
PRIMARY EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kinugasa et al. (USP 5,043,817).

With respect to claim 1, Kinugasa teach or discloses a solid-state image sensing device (as shown in fig 6) comprising: a plurality of groups of sensors, (CCD line sensor 17, 18, 16 of fig 6) each of the sensors (line sensors, 16,17, 18 having a pixel line charge transfer timing chart of driving pulse group, 7A and 7B) comprises a pixel line and a charge-transfer part (photodiode 16 of fig 6) for transferring signal charge to be read out from each pixel of the pixel line, see (col.5, lines 43-50); and

driving means, (sensor driving circuit 11 of fig 5) by which incase read out of the signal charge is performed at a different timing between each plurality of groups of sensors, (as discussed in col.8, lines 35 through 65, the signal are red out every one horizontal scanning period in one row unit, --- all row have been completely read out with in different time period, fig 7C) during a read-out period of a first group of sensor, (photodiode 16 of fig 6) stopping transfer driving of the signal charge of the other sensor (group of sensors 17 of fig 6, is performed, (col.8, lines 50-55).

With respect to claim 2, Kinugasa et al., discloses a solid-state image-sensing device (fig 6), wherein said groups of sensors are formed on the same chip (image sensor 16, 17, 18 are formed in same CCD chips of fig 6).

With respect to claim 3, Kinugasa, discloses a solid-state image sensing device (fig 6), wherein a reading period of the signal charge from said pixel line to said charge-transfer part in said plurality of groups of sensors (the reading period of the signal charge from plurality of line sensor such photodiode 16, 17, 18, is determined by switch at different time sequence, col.8, lines 50-55), is different for each group of sensor (sensor 16, 17 and 18 of fig 6).

With respect to claim 4, Kinugasa, discloses a solid-state image sensing device (fig 6), wherein said driving means (drive circuit 11 of fig 1) comprises transfer driving of a transfer stage in the vicinity of a final transfer stage of the charge-transfer part in said

other sensor during the period when transfer driving of the signal charge in said other sensor is stopped, (the reading period of the signal charge from plurality of line sensor such photodiode 16, 17, 18, is determined by switch 15 of fig 1, at different time sequence, col.8, lines 50-55).

With respect to claim 5, Kinugasa et al., discloses a solid-state image sensing device (fig 1), wherein said driving means (sensor driving circuit 11 of fig 5) comprises restarting of transfer driving of the signal charge in said other sensor in accordance with the output timing of said one sensor, (drive circuit 11, transfer charge from line sensors 16, 17 and 8 of fig 6, when transfer charge stopped from one of the line sensor by switch circuit 15 of fig 5, see col.3, lines 40-45).

With respect to claim 6, Kinugasa teach or discloses a method for driving solid-state image sensing device (as shown in fig 6) comprising: a plurality of groups of sensors, (CCD line sensor 17, 18, 16 of fig 6) each of the sensors (line sensors, 16,17, 18 having a pixel line charge transfer timing chart of driving pulse group, 7A and 7B) comprises a pixel line and a charge-transfer part (photodiode 16 of fig 6) for transferring signal charge to be read out from each pixel of the pixel line, see (col.5, lines 43-50), the driving method, comprises stopping transfer driving of the signal charge of a second group of sensors wherein during a read-out period of a first group of sensor, (photodiode 16 of fig 6) in case of read-out of signal charge at different timing (as discussed in col.8, lines 35 through 65, the signal are red out every one horizontal

scanning period in one row unit, --- all row have been completely read out with in different time period, fig 7C) between each of said plurality of group of sensors (fig 6) is performed, (col.8, lines 50-55).

With respect to claim 7, Kinugasa et al., discloses a method for driving solid-state image-sensing device (fig 6), wherein said groups of sensors are formed on the same chip (image sensor 16, 17, 18 are formed in same CCD chips of fig 6).

With respect to claim 8, Kinugasa et al., discloses a method for driving solid-state image-sensing device (fig 6), wherein a reading period of the signal charge from said pixel line to said charge-transfer part in said plurality of groups of sensors is different for each group of sensors, as discussed in col.8, lines 35 through 65, the signal are red out every one horizontal scanning period in one row unit, --- all row have been completely read out with in different time period, fig 7C)

With respect to claim 9, Kinugasa, discloses a solid-state image sensing device (fig 6), wherein transfer driving (driving CKT 11 of fig 5) of at least a final transfer stage of the charge-transfer part in said other groups of sensors (part of photodiode 16 of fig 6), is continued during the period when the remainder of the transfer driving of the signal charge in said other group of sensor is stopped, (the reading period of the signal charge from plurality of line sensor such photodiode 16, 17, 18, is determined by switch 15 of fig 1, at different time sequence, col.8, lines 50-55).

With respect to claim 10, Kinugasa discloses a method for driving a solid-state image sensing device (fig 6), wherein restating of transfer driving of the signal charge in said other group of sensors in accordance with outputting timing of said first group of sensors, (drive circuit 11, transfer charge from line sensors 16, 17 and 8 of fig 6, when transfer charge stopped from one of the line sensor by switch circuit 15 of fig 5, see col.3, lines 40-45).

With respect to claim 11, Kinugasa teach or discloses image scanner (as shown in fig 6) comprising: a solid-state image sensing device (fig 6) for an image sensor to read a document image, solid- image sensing device comprising: a plurality of groups of sensors, (CCD line sensor 17, 18, 16 of fig 6) each of the sensors (line sensors, 16,17, 18 having a pixel line charge transfer timing chart of driving pulse group, 7A and 7B) comprises a pixel line and a charge-transfer part (photodiode 16 of fig 6) for transferring signal charge to be read out from each pixel of the pixel line, see (col.5, lines 43-50); and driving means, (sensor driving circuit 11 of fig 5) by which incase read out of the signal charge is performed at a different timing between each plurality of groups of sensors, (as discussed in col.8, lines 35 through 65, the signal are red out every one horizontal scanning period in one row unit, --- all row have been completely read out with in different time period, fig 7C) during a read-out period of a first group of sensor, (photodiode 16 of fig 6) stopping transfer driving of the signal charge of the other sensor (group of sensors 17 of fig 6, is performed, (col.8, lines 50-55).

With respect to claim 13, Kinugasa et al. teaches a solid-sate image sensing device (fig 6), wherein said first group of sensors and said second group of sensors comprise photo-detectors, (image sensors 16, 17, and 18 are formed in the same CCD chips of fig 6)

With respect to claim 14, Kinugasa et al. teaches a method of driving solid-sate image sensing device (fig 6), wherein said first group of sensors and said second group of sensors comprise photodetectors, (image sensors 16, 17, and 18 are formed in the same CCD chips of fig 6).

With respect to claim 15, Kinugasa et al. teaches image scanner (fig 6), wherein said first group of sensors and said second group of sensors comprise photo-detectors, (image sensors 16, 17, and 18 are formed in the same CCD chips of fig 6)

With respect to claim 16, Kinugasa et al. teaches an image sensor (fig 6), wherein said first group of sensors and said second group of monochrome-sensors comprise photodetectors, (image sensors 16, 17, and 18 are formed in the same CCD chips of fig 6).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kinugasa (USP 5,043,817) in view of Beckett (USP 5, 852, 502)

With respect to claim 12, Kinugasa teach or discloses image scanner (as shown in fig 6) comprising: a solid-state image sensing device (16, 17 and 18 of fig 6) for an image sensor to read a document image, (object 19 of fig 1) solid-mage sensing device (fig 6) comprising: at least first group of color sensors (16 of fig 6), and second group of monochrome sensors (17 and 18 of fig 6) formed on the same chips, (sensors 16, 17 and 18 are on same chips CCD) each of the sensors comprising a pixel line and a charge-transfer part for transferring signal charge to be read from each pixel of the pixel line; and driving means (sensor driving 11 of fig 5) which stops transfer driving of the signal charges of the color sensors (sensor shown in fig 6, are color sensor) during a reading period of the sensors, (as discussed in col.8, lines 35 through 65, the signal are red out every one horizontal scanning period in one row unit, --- all row have been completely read out with in different time period, fig 7C).

However, Kinugasa et al., does not expressly teach a reading period of monochrome sensor. **But** Beckett teaches a monochrome sensor (22 of fig 1) is arranged beside a color sensor (24 of fig 1).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging device of Kinugasa to include: monochrome sensor.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kinugasa imaging device by the teaching of Beckett for the purpose of obtaining a preferable color or monochrome image choice for all the prints of different color to be exactly superimpose.

Response to applicant's arguments

6. Applicant's response filed April 27, 2006, has been reviewed and respectfully considered as indicated in the Office action discussed above. However, the rejection to the amended application has been maintained for the reason as follows:

a) Examiner believes that the prior art used to reject the application still read on the amended claims, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

b) The amended claimed limitation are still taught by the reference because the amended claimed limitation do not clearly point out the patentable novelty which

applicant think the claims present in view of the state of the art disclosed by the references cited.

c) The claimed limitation does not show how the amendments avoid the references, and/or how the claims define a patentable invention specifically pointing out how the language of the claims patentably distinguishes them from the references.

Therefore, the rejection to claims 1 through 16, have been maintained, and this Office action is final.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Negussie Worku whose telephone number is 571-272-7472. The examiner can normally be reached on 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore, can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Negussie Worku
Patent Examiner
Art Unit 2626
June2 7, 2006

DOUGLAS Q. TRAN
PRIMARY EXAMINER